REMARKS

Claims 1-23 are pending in the instant application. Claims 1-4, 6-13 and 15-22 stand rejected. Claims 5, 14 and 23 stand objected to as being dependent upon a rejected base claim. Reconsideration of this application is respectfully requested in light of the following remarks.

Objection to Oath/Declaration

The Office Action requires correction of the Declaration stating that the Declaration is defective for reciting "first and sole inventor" when three inventors have signed the declaration. Applicants submit that the Declaration recites "Full name of sole inventor (*or 1st joint inventor*)." (Emphasis added). Further, PTO Form SB/01 recites almost identical language "NAME OF SOLE OR FIRST INVENTOR."

Therefore, Applicants submit that the Declaration is not defective and correction should not be required.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-4, 6-8, 10-13, 15-17 and 19-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan et al. (U.S. Patent No. 6,301,254) in view of Al-Salameh (U.S. Patent No. 6,262,820) and Huggins et al. (U.S. Patent No. 6,198,744). The rejection of these claims is respectfully traversed.

Chan et al. teaches a method and apparatus providing virtual path ring protection of Asynchronous Transfer Mode (ATM) traffic over a Synchronous

Optical Network (SONET) unidirectional Path Switched Ring (UPSR). A selector function occurs at the ingress of the ATM traffic to the UPSR and directs the ATM traffic to its destination via a virtual path over the UPSR. ATM cells are transported to destinations based upon information in cell headers which form a virtual path between a present location of the cell on the ring and a destination. Chan et al. further teaches that a UPSR may include two fiber rings with one ring carrying a work signal in one direction and the second ring carrying an identical "protection" signal in the opposing direction.

Al-Salameh teaches an optical transmission system that employs a plurality of optical nodes interconnected in an optical ring transmission configuration by at least two optical transmission media. Each node autonomously controls an optical switch matrix in the node for effecting a desired optical restoration after an optical transmission failure without the need of switch control signals from other nodes in the ring, from a main controller or from a central controller.

Specifically, a main controller 208 supplies switch information, among others, to a maintenance channel unit 209. The maintenance channel unit 209 supplies maintenance information via the maintenance channel to optical combining units 213 and 214 where it is combined with other optical channels (if any) to be added via add/drop multiplexers 210 and 211 to be transported to other optical nodes for use as desired at those optical nodes. Further, the optical maintenance channel information is supplied from optical splitters 212 and 215 to the maintenance channel unit 209, and thereafter to the main

controller 208. Optical communications channels dropped by the add/drop multiplexers 210 and 211 are also supplied to the optical splitters 212 and 215, respectively. Optical communications channel information from the optical splitters 212 and 215 is supplied to optical terminal equipment 216 (e.g., SONET/SDH terminal or ATM switch) as desired.

In operation, in response to detection of a loss of optical signal, restoration is initiated by switch matrix 201 in response to switch (SC) signal causing an optical switch unit 301 to disconnect specific inputs from specific outputs. This operation of the switch matrix 201 essentially causes a copy of the optical signal that normally is supplied to an output N of the optical service transmission capacity (fiber) to be sent in a direction away from the transmission media or optical amplifier failure causing the loss of signal output on the optical transmission capacity.

Huggins et al. teaches an ATM based very-high-bit-rate subscriber line (VDSL) communication system having an optical ring with a plurality of multiplexers. An information provider communicates with central offices through a single optical ring. The central offices are also configured to statistically multiplex multiple data signal from the host digital terminals into a single data signal for transmission to the information provider via the optical ring.

There is no teaching or suggestion within the combination of Chan et al., Al-Salameh and Huggins et al. that approach the recitations of independent claims 1, 10 and 19. In particular, the combination fails to teach or suggest at

least an "asynchronous feeder multiplexer adapted to ... *replace* the components of the signals on the first path with copies of components of signals running in an opposite direction on a second path" as recited in claims 1 and 10; and "*replacing* the components of the signals on the first path of the ring with copies of components of signals running in an opposite direction on a second of the ring" as recited in claim 19. (Emphasis added).

The combination, and specifically, Al-Salameh, merely discloses that upon detecting a loss of optical signal on an incoming port, and in order to effect restoration of a node, the node autonomously switches its optical switch matrix configuration (i.e., causes the necessary switch connections to be made) to route a copy of its outgoing optical signal in a direction away from the fault. There is no teaching or suggestion to replace components of the signal. In contrast, the claimed invention recites replacing components of signals on a first path with copies of components of signals running in an opposite direction on a second path.

Further, there is no teaching or suggestion to combine the references. In fact, the references teach away from such a combination. Chan et al. teaches a selector function at the ingress of ATM traffic to a UPSR; Al-Salameh teaches autonomous control of optical switches without the need for switch control signals from any other node or from a main or central controller; and Huggins et al. teaches an information provider communicating with a plurality of central offices through a single optical ring. Applicants submit that there is no teaching or suggestion to combine these references, and in particular, to

combine the autonomous control of Al-Salameh with Chan et al. and the centralized control of Huggins et al. Al-Salameh requires no switch control signals from a central controller, and thus, there is no motivation for combination with the centralized control system taught in Huggins et al. or with the selector function of Chan et al. Applicants further submit that the references also teach away from the combination of these different control systems. Al-Salameh specifically teaches that there is no need for switch control signals from a main controller or from a central controller contrary to the centralized control system disclosed in Huggins et al. and the failure notification system having a selector function at the ingress of ATM traffic to a UPSR as taught in Chan et al.

Further, claims 2-4, 6-8, 11-13, 15-17 and 20-22, depend from allowable independent claims and are allowable for at least the same reasons that the independent claims from which they depend are allowable.

Claims 9 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chan et al. in view of Al-Salameh and Huggins et al. as applied to claims 1-4, 6-8, 10-13, 15-17 and 19-22, and further in view of Au (U.S. Patent No. 6,473,397). The rejection of these claims is respectfully traversed.

Applicants submit that even from a cursory review of Au, there is no teaching or suggestion that approaches the recitations of the independent claims as discussed above. Therefore, Au fails to make up for the deficiencies of the combination of Chan et al., Al-Salameh and Huggins et al., and claims 9

and 18, which depend from allowable independent claims, are allowable for at least the same reasons that the independent claims from which they depend are allowable.

Therefore, Applicants respectfully submit that the rejections under 35 U.S.C. § 103(a) are improper and should be withdrawn.

Allowable Subject Matter

Claims 5, 14 and 23 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant is not rewriting these claims in independent form because each depends from an allowable independent claim and is allowable for at least the same reasons as the independent claim from which it depends is allowable as discussed above.

CONCLUSION

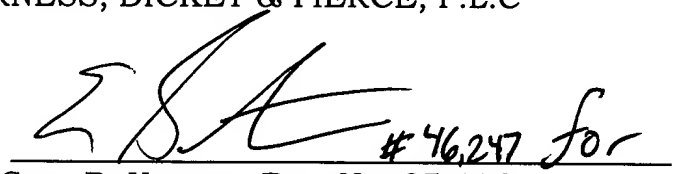
Accordingly, in view of the above remarks, and all of the stated grounds of rejection having been properly traversed, accommodated, and/or rendered moot, reconsideration of the rejections and allowance of each of claims 1-23 is earnestly solicited. It is believed that a full and complete response has been made to the outstanding office action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application before allowance thereof, the Examiner is respectfully requested to contact Gary D. Yacura (Reg. No. 35,416) at (703) 668-8023.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C

By:  #46,247 for

Gary D. Yacura, Reg. No. 35,416

GDY/ERS/lbe

11730 Plaza America Drive, Suite 600
Reston, Virginia 20190
(703) 668-8000